

## CLAIMS:

1. A method of determining the signal strength in a receiver or transmitter with complex signal processing using the in-phase channel (I channel) and the quadrature channel (Q channel), characterized in that the field strength signals of the I channel and of the Q channel are fed to an evaluation unit and, in the evaluation unit, an overall field strength  
5 signal is generated on a logarithmic scale without intermediate frequency residues from the individual field strength signals.

2. A method as claimed in claim 1, characterized in that the overall field strength signal is generated in the evaluation unit in accordance with the relation

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$$\text{FieldSt} = \ln (e^2 I_{\log} + e^2 Q_{\log}),$$

where FieldSt is the overall field strength signal and  $I_{\log}$  and  $Q_{\log}$  are the field strength signals of the I channel and of the Q channel, respectively.

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3. A method as claimed in claim 1 or 2, characterized in that the field strength signals of the I channel and of the Q channel are fed to the evaluation unit without amplification.

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4. A method as claimed in claim 1 or 2, characterized in that the field strength signals of the I channel and of the Q channel are amplified before they are fed to the evaluation unit.

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5. A circuit arrangement for determining the signal strength in a receiver or transmitter with complex signal processing using the in-phase channel (I channel) and the quadrature channel (Q channel), characterized in that an evaluation unit (20) is provided, which has two inputs (22, 24) for the field strength signals ( $I_{\log}$ ,  $Q_{\log}$ ) of the I channel and of the Q channel and which generates an overall field strength signal (FieldSt) on a logarithmic scale without intermediate frequency residues from the individual field strength signals ( $I_{\log}$ ,  $Q_{\log}$ ), in order to output it at an output (26) of the evaluation unit (20).

6. A circuit arrangement as claimed in claim 5, characterized in that the evaluation unit (20) generates the overall field strength signal (FieldSt) in accordance with the relation

$$\text{FieldSt} = \ln (e^2 I_{\log} + e^2 Q_{\log}).$$

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7. A circuit arrangement as claimed in claim 5 or 6, characterized in that the evaluation unit (20) contains in each case one diode (28, 30) for the I channel and the Q channel, where the anodes of the diodes are in each case connected to the inputs (22, 24) for the field strength signals of the I channel and of the Q channel and the cathodes of the diodes (28, 30) are connected to one another, to a current source (32) and to the output (26) of the evaluation unit (20).

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